

National Institutes of Health

National Institute of Child
Health & Human Development



Genetics and Prevention Research at NICHD

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Child Development and Behavior Branch

Society for Prevention Research 15th Annual Meeting
Preconference Workshop #1
May 29, 2007



NICHD Research Mission:

To ensure that every person is born healthy and wanted, that women suffer no harmful effects from reproductive processes, that all children have the chance to achieve their full potential for healthy and productive lives, free from disease or disability, ensure the health, productivity, independence, and well-being of all people through optimal rehabilitation.

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NIH Institutes

 **National Cancer Institute (NCI)** - Established in 1937
 NCI leads a national effort to eliminate the suffering and death due to cancer. Through basic and clinical biomedical research and training, NCI conducts and supports research that will lead to a future in which we can prevent cancer before it starts, identify cancers that do develop at the earliest stage, eliminate cancers through innovative treatment interventions, and biologically control those cancers that we cannot eliminate so they become manageable, chronic diseases. [more >](#)

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NICHD Strategic Funding Plan Biobehavioral Development Research



- Targets the development of behavioral processes and their interrelations with molecular, genetic, cellular, and neural systems, and environmental factors;
- Strives to understand how these interrelations contribute to typical and atypical development;
- Requires a more integrated research approach.

Biobehavioral Studies Should Be Able to Address...

- How behavioral/environmental processes influence biological development as well as how biological factors influence behavioral / environmental interactions;
- The impact of culture and early environments on biology as well as the biological correlates of behavioral development.



- Biobehavioral influences on social behavior throughout development
- Influences of sex/gender throughout the developmental process
- Understanding and facilitating learning in typically and atypically developing populations
- Understanding Adolescence
- Prevention and intervention of developmental disabilities
- Health behavior and risk factors in childhood
- Interactions between individual biological processes and environment affecting or facilitating development



Funding

Last Update: 05/24/2007 [Printer Friendly](#) [Email This Page](#)

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Current Funding Opportunity Announcements (FOAs) for All NICHD

[Career development and training/fellowships](#)

Type of FOA:

Current Funding Opportunity Announcements (FOAs)

[PAR-07-352](#)
Bioengineering Research Partnerships (BRP)[R01]
Letter Of Intent Receipt Date: Not Required
Application Receipt Date: May 07, 2010

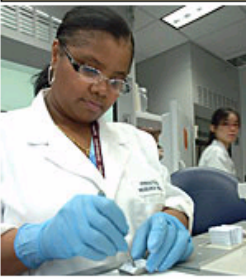
[Funding news flashes](#)

[PAR-07-350](#)
Female Health and Egg Quality (R01)
Letter Of Intent Receipt Date: September 19, 2007
Application Receipt Date: October 19, 2007

[Funding policies and peer review](#)

[PA-07-343](#)
Psychosocial/Behavioral Interventions and Services Research in Autism Spectrum Disorders (R34)
Letter Of Intent Receipt Date:
Application Receipt Date: March 16, 2010

[Research grants and contracts](#)



[PA-07-233](#)
Multidisciplinary Translational Research in Critical Care (R01)
Letter Of Intent Receipt Date: Not Applicable
Application Receipt Date: February 05, 2010

NICHD Program Announcements

- [PA-07-149](#) **The Science And Ecology Of Early Development (SEED) [R01]**
 - How does poverty interact with biological factors in development, and differentially impact neural and psychophysical developmental systems?
 - What are the mutual influences of physical health, genetics, and nutrition on child outcomes and how do conditions of poverty interact with these factors?
 - How do children's age, gender, and temperament interact with parents' characteristics to influence parenting patterns that affect child development?

NICHD Program Announcements

- [PA-07-285](#) **Translational Research in Eating Disorders (R01)**
 - Biological and behavioral factors that contribute to anorexia, bulimia, and binge eating disorders.
 - Preventive interventions and effective treatments in populations of youth and young adults with eating disorders.
 - Studies examining the relationships between eating disorders and other health risk behaviors such as substance abuse, self-injurious behavior and suicide.

NICHD Program Announcements

- [PA-07-096](#) **Collaborative Research for Molecular and Genomic Studies of Basic Behavior in Animal Models (R01)**
 - How maternal behaviors might interact with genetic processes associated with development of offspring in the short-term, or over the offspring's lifespan.
 - Use of animal models for investigating gene X environment interactions affecting behavior in developmental domains such as social development, development of resiliency, and cognitive development.

NICHD Program Announcements

- [PA-07-083](#) **Basic and Translational Research in Emotion (R01)**
 - What are the biological (including genetic) and experiential sources of individual differences in emotional reactivity and regulation throughout development?
 - What are the developmental psychobiological contributions of stress and other environmental influences (e.g., trauma, violence) on emotional development, regulation, and expression?

NICHD Program Announcements

- [PA-06-542](#) **Mechanisms, Models, Measurement, & Management in Pain Research (R21)**
 - Identification of gene polymorphisms and gene-environment interactions that predict pain development or treatment response.
 - Risk factors: age, ethnicity, family history, gender, genetic predisposition, lifestyle, occupation, pre- or co-existing mental and physical disorders, and socio-economic status (SES)

NICHD Program Announcements

- [PA-07-140](#) **Research on Sleep and Sleep Disorders (R01)**
- [PA-07-060](#) **Methodology and Measurement in the Behavioral and Social Sciences (R01)**
- [PA-07-046](#) **Research on Mind-Body Interactions and Health (R01)**

Training Mission:



- To increase the researchers dedicated to biomedical, biobehavioral or behavioral approaches for understanding and improving:
 - Typical development from conception through young adulthood
 - Developmental disabilities or disorders and interventions
 - Influences of family, peers, school, culture and population dynamics on developmental outcomes
 - Pregnancy and perinatal health outcomes
- NRSAs, K-career awards, diversity supplements

Currently Funded Studies



- **The Early Growth and Development Study**

Reiss, David/ Leve, Leslie;
Oregon Social Learning Center

- To detail mechanisms by which genetic factors and parent-child relationships combine to influence the development of children across the toddler transition. Currently looking at the transition into kindergarten and first grade.

Currently Funded Studies



- **Genetics of General and Specific Math Disabilities**
- Petrill, Stephen; Penn State
 - Genetic and environmental mechanisms that underlie individual differences in general and specific mathematics cognition—a twin study.

Currently Funded Studies



- **Age at First Sex, Genes, Religion, and Other Social Influences**

Guo, Guang; UNC, Chapel Hill

- The goal of this proposed project is to identify the influences of genetic and environmental factors and their interactions on risky sexual behavior in adolescence using a sub-sample of about 2,600 participants of the National Longitudinal Study of Adolescent Health (Add Health)

Currently Funded Studies



- **Genetics, School Environments and Cognitive Development**
- Plomin, Robert; Kings College, London
 - This 4-year project is testing the hypothesis that genes play a part in mediating the effects of the school environment on educationally relevant behaviors, that is, that children actively select, modify and create environments that are correlated with their genetic propensities.

How to survive in an economically challenged grant environment

- Plan well ahead and call Program
- Keep it smaller rather than larger
 - Under \$500k per year direct costs
 - Utilize competitive supplements or multiple smaller grants
- Request dual assignment
- Expect resubmissions



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